

Adopt Env-Wm 1600 to read as follows:

## CHAPTER Env-Wm 1600 STANDARDS FOR REPORTING AND REMEDIATION OF OIL DISCHARGES

Statutory Authority: RSA 146-A:11-c, and 146-C:9

### PART Env-Wm 1601 GENERAL PROVISIONS

Env-Wm 1601.01 Purpose. The purpose of these rules is to establish procedures and requirements for notification, reporting, response actions, investigation, remediation, and management of sites where discharges of oil have occurred.

Env-Wm 1601.02 Applicability. The following shall be subject to the requirements of this chapter:

(a) All environmental investigations and remediation of discharges of oil identified in this chapter, conducted pursuant to RSA 146-A and RSA 146-C;

(b) The procedures for the notification of discharges of oil identified in this chapter; and

(c) Emergency and initial response actions conducted in response to a discharge of oil.

Env-Wm 1601.03 Definitions.

(a) “Activity and use restriction” means controls imposed at a site, to achieve or maintain a condition that is protective of human health and the environment, which is recorded in the registry of deeds for the county in which the site is located.

(b) “Ambient groundwater quality standards (AGQS)” means “ambient groundwater quality standards” as defined in RSA 485-C:2, I, namely “maximum concentration levels for regulated contaminants in groundwater which result from human operations or activities, as delineated in RSA 485-C:6.”

(c) “Background” means those levels of chemical concentrations that would exist at the site in the absence of the discharge and which include chemicals that are ubiquitous and consistently present at or in the vicinity of the site and are attributable to:

(1) Coal or wood ash associated with fill material;

(2) Petroleum residues that are incidental to the normal operation of motor vehicles; and

(3) Asphalt pavement.

(d) “Certificate of completion” means a certificate issued by the department which certifies that:

(1) The activities specified in an approved remedial action plan have been completed;

(2) Any necessary activity and use restrictions have been implemented;

(3) Any monitoring requirements are being met; and

(4) All fees and costs due under RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 147-F have been paid.

- (e) “Certificate of no further action” means a certificate issued by the department which certifies that:
- (1) No further investigation, remediation, or other actions are required;
  - (2) Any necessary activity and use restrictions have been implemented;
  - (3) Any monitoring requirements necessary to implement an activity and use restriction are being met; and
  - (4) All fees and costs due under RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 147-F have been paid.
- (f) “Chemical Abstract Service Number” (CAS No.) means a number assigned to molecules and mixtures identified in the “Chemical Abstracts Registry” dated November 2002 that provides a unique identification for chemicals as well as a means for cross-checking chemical names.
- (g) “Contamination” means the presence of oil, as defined herein, other than naturally occurring substances at naturally occurring or background levels, in soil, groundwater, soil gas, air, sediment, surface water, construction/excavation debris, or any other material at a concentration that has the potential to adversely affect human health or the environment. For the purposes of this part, this also includes the term “contaminated”.
- (h) “Department” means the New Hampshire department of environmental services.
- (i) “Director” means the director of the waste management division of the New Hampshire department of environmental services.
- (j) “Discharge” or “spillage” means “discharge” or “spillage” as defined in RSA 146-A:2,I-a, namely “the release or addition of any oil to land, groundwater or surface water.”
- (k) “Electronic signature” means “electronic signature” as defined in RSA 294-E:2,VIII, namely “an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record.”
- (l) “Electronic record” means “electronic record” as defined in RSA 294-E:2,VII, namely “a record created, generated, sent, communicated, received, or stored by electronic means.”
- (m) “Groundwater” means “groundwater” as defined in RSA 146-A:2,I-c, namely “subsurface water that occurs beneath the water table in soils and geologic formations.”
- (n) “Groundwater contamination” means a violation of the groundwater quality criteria in Env-Wm 1403.03.
- (o) “Groundwater management permit” means a permit issued in accordance with Env-Wm 1403 pursuant to RSA 485-C:4,VIII to a site owner or responsible party to establish a groundwater management zone, manage the use of contaminated groundwater, and monitor remedial progress.
- (p) “Groundwater management zone” means the subsurface volume in which groundwater contamination associated with a discharge is contained.
- (q) “Initial site characterization” means a preliminary assessment following a discharge of oil, which is performed to collect information regarding the subsurface conditions of a site, the extent of the discharge, and potential receptors in the area.

(r) “Non-aqueous phase liquid” (NAPL) means a liquid containing oil, that is immiscible or only partially miscible in water, and which exists as a separate phase.

(s) “Oil” means “oil” as defined in RSA 146-A:2,III, namely “petroleum products and their by-products of any kind, and in any form including, but not limited to, petroleum, fuel, sludge, crude, oil refuse or oil mixed with wastes and all other liquid hydrocarbons regardless of specific gravity and which are used as motor fuel, lubricating oil, or any oil used for heating or processing. The term “oil” shall not include natural gas, liquefied petroleum gas or synthetic natural gas regardless of derivation or source.”

(t) “Person” means “person” as defined by RSA 146-A:2,VI, namely “individual, partnership, joint venture, corporation, association or any group of the foregoing or the United States of America, any agency thereof and any other legal entity.”

(u) “Potential receptor” means any living organism or environmental medium that is in the pathway of contamination from a discharge.

(v) “Potentiometric surface map” means a map of the hydraulic head in an aquifer.

(w) “Receptor” means a living organism or an environmental medium that is exposed to contamination from a discharge.

(x) “Remedial action” means any measure or combination of measures which will, when implemented, ensure attainment of a level of control of contaminants such that no contaminant will present a significant risk of harm to human health or the environment.

(y) “Remedial action plan” means proposed actions to remove, treat or contain contamination sources, to protect human health and the environment, to contain contaminated groundwater within the limits of a groundwater management zone, to restore groundwater quality to meet groundwater quality criteria of Env-Wm 1403, and to restore soil quality to meet soil cleanup standards of Env-Wm 1602.02.

(z) “Responsible party” means any person subject to the strict liability provisions of RSA 146-A:3-a or RSA 146-C:11.

(aa) “Signature” means the name, mark, symbol, sound, or digital or electronic logical association affixed to a writing to attest to its validity.

(ab) “Site” means the place or location where a discharge is known or suspected to have occurred and includes the full extent of contamination resulting from the discharge.

(ac) “Site investigation” means an investigation of a discharge of oil at the site and the off-site surrounding area, which determines the location and full extent of contamination and identifies receptors and potential receptors.

(ad) “Soil” means any unconsolidated material above bedrock, regardless of particle size, produced by the physical and chemical disintegration of bedrock and which might contain organic matter. Soil does not include sediment found in surface water.

(ae) “Surface water” means “Surface water” as defined in RSA 146-A:2,VI-b, namely “perennial and seasonal streams, lakes, ponds, and tidal waters within the jurisdiction of the state, including all streams, lakes, or ponds bordering on the state, marshes, watercourses, and other bodies of water, natural or artificial.”

(af) “Mg/kg” means milligrams per kilogram.

(ag) “Water supply well” means a well that serves as a drinking water supply, including public water supplies, as defined in RSA 485:1-a,XV.

(ah) “Writing” means any intentional reduction to tangible form including letters, words, or numbers, or their equivalent, set down by handwriting, typewriting, photostating, photographing, magnetic impulse, mechanical or electrical recording, or other form of data compilation.

#### PART Env-Wm 1602 WATER QUALITY AND SOIL CLEANUP STANDARDS

Env-Wm 1602.01 Groundwater Quality Criteria. All groundwater of the state shall meet the groundwater quality criteria and ambient groundwater quality standards of Env-Wm 1403.

#### Env-Wm 1602.02 Soil Cleanup Standards.

(a) All contaminated soil resulting from a discharge of oil shall meet the soil standards in Table 1600-1 except as provided for in Env-Wm 1602.02(c) through Env-Wm 1602.02(f) below.

(b) Soil standards shall be as set forth in Table 1600-1 below:

Table 1600-1 SOIL STANDARDS		
Chemical Name	CAS No.	S-1 (mg/kg)
Benzene	71-43-2	0.3
n- Butylbenzene	104-51-8	110
sec-Butylbenzene	135-98-8	130
tert-Butylbenzene	98-06-6	100
Dichloroethane, 1,2-	107-06-2	0.1
Ethylbenzene	100-41-4	140
Ethylene dibromide	106-93-4	0.1
Isopropyl benzene	98-82-8	330
p-Isopropyl toluene	99-87-6	390
n-Propyl benzene	103-65-1	85
Lead	7439-92-1	400
Methyl tert butyl ether	1634-04-4	0.2
Tetrachloroethylene	127-18-4	1.8
Toluene	108-88-3	100
Total Petroleum Hydrocarbons		10,000
Trichloroethylene	79-01-6	0.8
Trimethylbenzene, 1,2,4	95-63-6	130
Trimethylbenzene, 1,3,5	108-67-8	96
Xylenes (mixed isomers)	1330-20-7	900
Polynuclear Aromatic Hydrocarbons - Carcinogenic		

Table 1600-1 SOIL STANDARDS		
Chemical Name	CAS No.	S-1 (mg/kg)
Benzo(a)anthracene	56-55-3	1.2
Benzo(a)pyrene	50-32-8	0.7
Benzo(b)fluoranthene	205-99-2	1.2
Benzo(k)fluoranthene	207-08-9	12
Chrysene	218-01-9	120
Dibenzo(a,h)anthracene	53-70-3	0.7
Indeno(1,2,3-cd)pyrene	193-39-5	1.2
Polynuclear Aromatic Hydrocarbons - Noncarcinogenic		
Acenaphthene	83-32-9	340
Acenaphthylene	208-96-8	490
Anthracene	120-12-7	8700
Fluoranthene	206-44-0	1200
Fluorene	86-73-7	77
Methylnaphthalene, 2-	91-57-6	100
Naphthalene	91-20-3	5
Benzo(g,h,i)perylene	191-24-2	Total of all three, less than 870
Phenanthrene	85-01-8	
Pyrene	129-00-0	

(c) In lieu of the soil standards in Table 1600-1, the responsible party may develop site-specific soil cleanup standards by evaluating the risk to human health and the environment by the methods described in the American Society for Testing and Materials (ASTM) Standard E 1739-95 entitled "Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites" (ASTM E 1739-95) dated November, 1995.

(d) Site-specific soil standards developed pursuant to (c), above, shall:

- (1) Demonstrate that leaching of contaminants to groundwater will not result in violations of ambient groundwater quality standards as specified in Env-Wm 1403.05;
- (2) Demonstrate that no significant risk to human health and the environment exists at the site pursuant to the procedures prescribed in the ASTM E 1739-95 in (c), above; and
- (3) In the evaluation of human health in (2), above, use a cumulative risk approach which compares site-specific information to a cumulative risk of an excess lifetime cancer risk of one in 100,000 and a cumulative non-cancer risk which is a hazard index equal to one pursuant to the procedures prescribed in the ASTM E 1739-95 in (c), above.

(e) In lieu of the soil standards in Table 1600-1, the responsible party may use an activity and use restriction at sites where a department-approved remedial action plan relies on the restriction of site activities

and uses to eliminate exposure pathways to achieve or maintain protection of human health and the environment.

(f) The soil standards in Table 1600-1 shall not apply at sites where contamination is at or below background levels and therefore would exist in the absence of the discharge.

#### PART Env-Wm 1603 NOTIFICATION

Env-Wm 1603.01 Purpose and Scope. The purpose of this part is to identify those discharges of oil that require notification to the department by a responsible party or other person and to set forth procedures for notification. This part shall apply to all discharges of oil to the environment.

Env-Wm 1603.02 Discharges Requiring Immediate Notification. The responsible party or other person required to notify under Env-Wm 1603.06 shall notify the department immediately after obtaining knowledge that a discharge meeting one or more of the following criteria has occurred:

- (a) A discharge of any oil into surface water or groundwater of the state;
- (b) A discharge of 25 gallons or more of oil to land;
- (c) A discharge of less than 25 gallons of oil to land where the oil will ultimately seep into groundwater or surface water unless the discharge is cleaned up immediately and properly disposed of;
- (d) A discharge that results in the presence of vapors which pose an imminent threat to human health;
- (e) A discharge resulting in a violation of the groundwater quality criteria of Env-Wm 1403.03 in a sample collected from a water supply well; or
- (f) A discharge resulting in the detection of NAPL.

#### Env-Wm 1603.03 NAPL Notification.

(a) The responsible party shall notify the department either orally or in writing immediately after obtaining knowledge of the detection of NAPL of greater than 1/8 inch in thickness on groundwater unless the NAPL is being managed in accordance with the following:

- (1) An emergency or initial response action conducted pursuant to Env-Wm 1604.02 or Env-Wm 1604.03;
- (2) A remedial action plan approved pursuant to Env-Wm 1605.13; or
- (3) A groundwater management permit issued pursuant to Env-Wm 1403.

(b) The responsible party required to notify the department in accordance with (a), above, shall provide as much of the following information as is available at the time of notification:

- (1) The name and the phone number of the person notifying the department;
- (2) The location of the discharge site including the department site identification number;
- (3) The type and thickness of the NAPL layer observed; and
- (4) A description of proposed NAPL recovery actions.

Env-Wm 1603.04 Potential Discharges Requiring Notification Within 60 days. The responsible party or other person required to notify under Env-Wm 1603.06 shall notify the department no more than 60 days after obtaining knowledge that a potential discharge meeting one or more of the following criteria has occurred:

- (a) A potential discharge resulting in a violation of the soil cleanup standards of Env-Wm 1602.02(b);
- (b) A potential discharge resulting in a violation of the groundwater quality criteria of Env-Wm 1403.03; and
- (c) At a site where the department has previously closed the site and additional information is obtained that would require notification pursuant to (a) or (b) above.

Env-Wm 1603.05 Exemptions to Potential Discharges Requiring Notification Within 60 days. If a potential discharge results in a violation of the groundwater quality criteria identified in Env-Wm 1403.03, the following shall be exempt from the notification requirements of Env-Wm 1603.04(b):

- (a) The owner of a facility with a groundwater release detection permit who shall instead report in accordance with Env-Wm 1403;
- (b) The owner of a public water supply who shall instead report in accordance with Env-Ws 351 through Env-Ws 359;
- (c) The owner of a facility with a groundwater discharge permit who shall instead report in accordance with Env-Ws 1500; and
- (d) The owner of a facility with a groundwater management permit who shall instead report in accordance with Env-Wm 1403.

Env-Wm 1603.06 Persons Required to Notify. The responsible party or any person who becomes aware of an oil discharge shall notify the department in accordance with Env-Wm 1603.

Env-Wm 1603.07 Notification Requirements.

(a) A person required to notify the department of a discharge pursuant to Env-Wm 1603.02 and Env-Wm 1603.04 shall provide notification to the department either orally or in writing, including as much of the following information as is available at the time of notification:

- (1) The name and the phone number of the person notifying the department;
- (2) The location of the discharge site;
- (3) The date and time of the discharge;
- (4) The type and amount of oil discharged;
- (5) The name(s) and phone number(s) of the responsible party;
- (6) The proximity of the discharge to receptors and potential receptors including water supply wells and surface water;

(7) The name, address, and telephone number of the contractor hired to clean up the contamination;

(8) A description of any emergency or initial response actions that have been taken or are proposed to be taken;

(9) The names of other federal, state, or local government agencies that have been notified, responded to the discharge, or both;

(10) The cause of the incident and the method used that detected the discharge; and

(11) All available reports and sampling results related to the discharge.

(b) A responsible party required to notify the department pursuant to Env-Wm 1603.02(e) or Env-Wm 1603.04(b) shall provide the department, within 60 days of obtaining knowledge of the discharge, a list of properties located within 500 feet of the site that are serviced by water supply wells. The list shall include tax map and lot number, owner's name and mailing address.

(c) A responsible party required to notify the department of a discharge identified in Env-Wm 1603.02(d), shall submit all indoor air quality results in writing to the department, and the owner of the property, within 5 business days after receiving results.

(d) A responsible party required to notify the department of a discharge identified in Env-Wm 1603.02(e), shall submit all water supply well results in writing to the department and the owner of the property on which the water supply well is located, within 5 business days after receiving results.

#### PART Env-Wm 1604 PRELIMINARY RESPONSE ACTIONS

Env-Wm 1604.01 Purpose. The purpose of this part is to describe the nature and extent of preliminary response actions that are required following a discharge and to prescribe standards and procedures for conducting emergency response actions, initial response actions, and initial site characterizations.

#### Env-Wm 1604.02 Emergency Response Action.

(a) The responsible party shall initiate an emergency response action as soon as practicable to prevent, eliminate, or minimize damage to human health and the environment for any discharge of oil.

(b) The responsible party shall conduct an emergency response action at the following sites:

(1) Where a discharge has created or might create hazardous or explosive vapors;

(2) Where the discharge of oil has caused the contamination of a private or public water supply well(s);

(3) Where the discharge of oil has caused a sheen on surface water;

(4) Where the discharge of oil has caused oil to enter a storm drain or sanitary sewer;

(5) At sites where NAPL is detected; and

(6) At any other site where the department determines and notifies the responsible party that emergency response actions are necessary to prevent, eliminate, or minimize damage to



human health and the environment.

(c) The responsible party shall conduct an emergency response action that:

- (1) Assesses and evaluates fire, health, and safety hazards;
- (2) Stops the discharge;
- (3) Contains the discharge;
- (4) Cleans up and disposes of discharged oil and contaminated debris in accordance with all local, state, and federal regulations;
- (5) Protects potential receptors from contamination; and
- (6) Stabilizes the site to protect human health and the environment.

(d) An emergency response action shall include, as applicable, the following:

- (1) Discharge containment measures;
- (2) Vapor abatement measures;
- (3) Drainage controls;
- (4) Providing potable water;
- (5) NAPL recovery;
- (6) Disposal of oil or contaminated debris;
- (7) Soil excavation and disposal;
- (8) Collection and analysis of soil, sediment, surface water, groundwater, soil gas, or indoor air samples; and
- (9) Any other assessment, containment, or removal action consistent with the purpose of emergency response actions or otherwise deemed necessary by the department to prevent, eliminate, or minimize damage to human health and the environment.

(e) The responsible party shall notify the department and others of the emergency response action in accordance with the provisions of Env-Wm 1603.

#### Env-Wm 1604.03 Initial Response Actions.

(a) The responsible party shall conduct an initial response action at a site following a discharge of oil that shall:

- (1) Reduce risks to human health and the environment; and
- (2) Reduce potential future costs of response actions by remediating or containing discharges until such a time as a more comprehensive response action conducted in accordance with the provisions of Env-Wm 1605 can be implemented.

- (b) An initial response action shall include, as applicable, the following:
  - (1) NAPL recovery;
  - (2) Groundwater treatment and recovery;
  - (3) Soil excavation;
  - (4) Soil vapor extraction;
  - (5) Receptor surveys;
  - (6) Vapor abatement measures;
  - (7) Collection and analysis of soil, sediment, surface water, groundwater, soil gas, or indoor air samples; and
  - (8) Any other assessment, containment, or removal action consistent with the purpose of an initial response action or otherwise deemed necessary by the department to prevent, eliminate, or minimize damage to human health and the environment.

(c) The responsible party shall notify the department and others of the initial response action in accordance with the provisions of Env-Wm 1603.

Env-Wm 1604.04 Emergency and Initial Response Action Reporting Requirements.

- (a) The responsible party shall submit a written report to the department within 30 days of completing an emergency response action or an initial response action.
- (b) The report shall include the following information:
  - (1) The site owner's name, address, and telephone number;
  - (2) The name(s), address(es), and telephone number(s) of the responsible party;
  - (3) The name(s), address(es), and telephone number(s) of the consultant and contractor hired to conduct the response action;
  - (4) Identification of potential receptors;
  - (5) The type and quantity of the discharge;
  - (6) A description of response actions conducted;
  - (7) Disposal documentation including copies of bills of lading and manifests;
  - (8) Copies of laboratory analytical data;
  - (9) A site sketch showing the location of the discharge in relation to site buildings and the site boundary; and
  - (10) A summary of findings.

Env-Wm 1604.05 Initial Site Characterization.

(a) The responsible party shall perform an initial site characterization following notification to the department of a discharge of oil except as provided for in Env-Wm 1604.07.

(b) The responsible party shall submit a report of the initial site characterization required in Env-Wm 1604.05(a) to the department within 60 days of a department request for an initial site characterization.

(c) The initial site characterization shall:

- (1) Describe the source, location and estimated quantity of the discharge including any response actions taken;
- (2) Describe the nature and extent of contamination encountered; and
- (3) Identify nearby receptors and potential receptors.

Env-Wm 1604.06 Initial Site Characterization Report. The initial site characterization report shall include the following:

(a) Site information including:

- (1) The department site identification number;
- (2) The site name and address;
- (3) The name, mailing address, and telephone number of the site owner and of a contact person for the site;
- (4) A description of all known discharges of oil at the site;
- (5) A description of all response actions conducted at the site;
- (6) A description of site use at the time of the discharge; and
- (7) A site sketch that includes the following:
  - a. The location of the discharge;
  - b. The location of site buildings;
  - c. The location of site underground utilities; and
  - d. The approximate site boundaries;

(b) A summary of groundwater, soil, surface water, and water supply well sampling data, as appropriate;

(c) A copy of borings logs, and monitoring well construction details;

(d) A preliminary assessment of receptors and potential receptors located within 500 feet of the site including:

- (1) Drinking water supply wells including owner's name and address; and
- (2) Surface water bodies; and
- (e) A summary of findings.

Env-Wm 1604.07 Initial Site Characterization Exemptions. An initial site characterization shall not be required if:

- (a) The department determines, based on preliminary response actions, that the site meets the no further action criteria of Env-Wm 1606.03; or
- (b) The department determines that a site investigation in accordance with Env-Wm 1605.01 is required to adequately characterize the nature and extent of the discharge.

Env-Wm 1604.08 Investigation Due to Discovery of Discharges from Unknown Sources. When a discharge from an unknown source is discovered adjacent to a facility as defined in RSA 146-A:2,IX or RSA 146-C:1,V, the owner of such facility shall conduct an initial site characterization in accordance with Env-Wm 1604.05.

#### PART Env-Wm 1605      COMPREHENSIVE RESPONSE ACTIONS

Env-Wm 1605.01 Site Investigation.

- (a) The responsible party shall perform a site investigation following notification to the department of a discharge of oil except as provided for in Env-Wm 1605.09.
- (b) The site investigation shall be prepared by, or under the direct supervision of, a professional engineer or a professional geologist licensed under RSA 310-A and shall bear the seal of the professional responsible for preparing the document.
- (c) The responsible party shall submit a report of the site investigation required in Env-Wm 1605.01(a) to the department for approval within 120 days of a department request for a site investigation.
- (d) The site investigation shall:
  - (1) Determine the source, nature, location, and full extent of contamination;
  - (2) Identify receptors and potential receptors; and
  - (3) Identify the need to conduct further investigation or remedial actions.
- (e) The department shall approve the site investigation upon determining that the report is complete pursuant to Env-Wm 1605.02 through Env-Wm 1605.08.

Env-Wm 1605.02 Site Investigation Report. The site investigation report shall include the following:

- (a) The site background information identified in Env-Wm 1605.03;
- (b) The summary of subsurface explorations and sampling identified in Env-Wm 1605.04;
- (c) The description of the site's geology and hydrology identified in Env-Wm 1605.05;

- (d) The conceptual model identified in Env-Wm 1605.06;
- (e) The remedial alternatives, recommendations, and summaries identified in Env-Wm 1605.07; and
- (f) The appendices identified in Env-Wm 1605.08.

Env-Wm 1605.03 Site Background Information. The site investigation report shall include the following site background information:

- (a) The department site identification number;
- (b) The site name, address, property deed reference by county book and page, property tax map and lot numbers;
- (c) The name, mailing address, and telephone number of the site owner and of a contact person for the site;
- (d) To the extent ascertainable, a history of site ownership and operation for the last 50 years or since initial development, whichever is less;
- (e) Copies of historical site plans and/or Sanborn Fire Insurance maps for the site, where available, for the last 50 years or since initial development, whichever is less;
- (f) A description of possible contamination sources past or present including but not limited to the following:
  - (1) Underground or above ground storage tank systems including pumps, piping and appurtenances;
  - (2) Dry wells and floor drains including discharge locations, if known; and
  - (3) Areas of stained soil, or stressed or dead vegetation.
- (g) A description of all known discharges of oil, including the following information:
  - (1) The date and a description of the discharge, including estimated quantities lost and recovered, the location of the discharge, and the party responsible for the discharge; and
  - (2) The date the discharge was reported to the department, if reported, and a description of all response actions taken;
- (h) A list of any previous investigations and reports pertinent to the site relating to a discharge of oil, including a brief summary of findings;
- (i) A copy of any previous investigation or report relating to a discharge of oil, if not already on file with the department;
- (j) A list of governmental records reviewed relating to discharges;
- (k) A locus plan using a color photocopy of a USGS map, 7-1/2 minute series if available, which clearly identifies the site location;
- (l) A site plan drawn to scale on an 8 1/2" x 11" or 11" x 17" sheet, that includes the following:

- (1) A title, a legend, and a true north arrow;
- (2) A graphic scale bar;
- (3) Source(s) from which the site plan was derived, if applicable;
- (4) The location, elevation, and datum of a permanent and recoverable bench mark;
- (5) Surface topography using ground spot elevations, contours, or noted changes in slope;
- (6) The location of the site's property boundaries;
- (7) The areas of known and possible contaminant sources past or present on the site including but not limited to the following:
  - a. Former and current underground or above ground storage tank systems including pumps, piping, and appurtenances;
  - b. Former and current dry wells and floor drains including discharge locations, if known; and
  - c. Areas of stained soil, or stressed or dead vegetation;
- (8) Any paved areas on the site;
- (9) The location of any underground utilities on the site and in public easements or rights of way within 100 feet of the site; and
- (10) Identification of the following on and within 100 feet of the site:
  - a. Surface water bodies;
  - b. Water supply wells;
  - c. Monitoring wells, test pits and borings;
  - d. Surface water sampling stations;
  - e. Physical structures and buildings; and
  - f. Drainage swales; and
- (m) The site plan prepared pursuant to (l) above, shall be used as a base map for additional plans.

Env-Wm 1605.04 Summary of Subsurface Explorations and Sampling. The site investigation report shall include a summary of subsurface explorations and sampling conducted at the site and off-site surrounding area including:

- (a) A description of test pits, borings, monitoring wells, and well development activities;
- (b) A description of water table elevation observations, organic vapor analyzer results, and odors noted;
- (c) A copy of the site plan showing the orientation of the graphical geologic cross section(s) and the location of test pits, borings, monitoring wells, and other sources of geologic information for the site;

(d) Groundwater, soil, air, soil gas, sediment, surface water, and water supply well sampling data, as applicable, including:

- (1) Sampling methodologies;
- (2) For all monitoring wells, surface water sampling points, and water supply wells where contamination has been detected, analytical results for a minimum of 2 sets of samples collected at least 2 weeks apart; and
- (3) At sites where groundwater contamination has been detected, samples collected from water supply wells at risk;

(e) A table(s) which summarizes all current groundwater, soil, surface water, and water supply well analytical data including:

- (1) Sample locations;
- (2) Sample dates;
- (3) Chemicals detected including the analytical detection limits;
- (4) Chemical concentrations; and
- (5) Chemicals that exceed regulatory limits; and

(f) A table(s) which summarizes historic groundwater, soil, surface water, and water supply well analytical data including:

- (1) Sample locations;
- (2) Sample dates; and
- (3) Chemical concentrations.

Env-Wm 1605.05 Site Geology and Hydrology. The site investigation report shall include a description of the geology and hydrogeology of the site including:

(a) Groundwater potentiometric surface(s), hydraulic gradients, flow direction, hydraulic conductivity, and seepage velocity;

(b) Soil types, distribution, and permeability;

(c) When encountered and drilled, bedrock type and characteristics, including depths and contours;

(d) A geologic cross-section(s) including, at a minimum, the following:

- (1) The horizontal and vertical scale of each cross-section;
- (2) Approximate ground surface elevations and inferred elevation of contacts between the major geologic units;
- (3) A complete textural description of the major soil and bedrock units, with geologic interpretation, such as till, stratified drift, weathered bedrock;

- (4) The location of all data sources, including soil borings, monitoring wells, test pits, and bedrock cores upon which the geologic interpretations are based;
  - (5) The line of section referenced to an appropriate site plan;
  - (6) The offset distance for all data points not located directly on the line of section;
  - (7) The screened interval of all groundwater monitor wells and piezometers, with measured water level or potentiometric surface elevations;
  - (8) The surveyed elevations of any surface water features intercepted by the line of section; and
  - (9) Contaminant concentrations at each data point indicated on the cross-section;
- (e) A table of groundwater elevation data including:
- (1) Groundwater elevations;
  - (2) Top of well casing elevations;
  - (3) Measured depth to water table from top of casing;
  - (4) If NAPL is present, measured depth to NAPL from top of casing; and
  - (5) If NAPL is present, NAPL thickness; and
- (f) A potentiometric surface map indicating the groundwater flow direction.

Env-Wm 1605.06 Conceptual Model. The site investigation report shall include a conceptual model that includes:

- (a) A narrative description supported by the technical data and a graphical presentation of that data that describes the occurrence and movement of groundwater and contaminants at the site including transport mechanisms, migration, and degradation pathways;
- (b) A technical explanation of the nature and extent of contamination in the soil, surface water, and groundwater including the following:
  - (1) Potential contaminant sources;
  - (2) A groundwater contaminant concentration contour map(s) which shall depict:
    - a. The lateral distribution of groundwater contamination; and
    - b. The predominant contamination characteristics;
  - (3) A soil contaminant concentration contour map(s) which shall depict:
    - a. The lateral and vertical extent of soil contamination; and
    - b. The predominant contamination characteristics; and
  - (4) Calculations estimating the amount of contaminant mass at the site;



(c) A potential receptor map using a tax map as a base which identifies and locates, to the extent ascertainable, the following listed items located within 1,000 feet of the site:

- (1) Streets;
  - (2) Properties, including tax map and lot number, ownership, and land use;
  - (3) Surface water bodies;
  - (4) Locations where potentially sensitive human subpopulations exist such as daycare centers, schools, playgrounds, parks, senior housing; and
  - (5) Water supply wells including tax map and lot number, owner's name and mailing address;
- (d) A list of water supply wells sampled in accordance with Env-Wm 1605.04 (d)(3), including:
- (1) The owner's name, mailing address, tax map and lot number; and
  - (2) The type of well construction and well depth to the extent ascertainable; and

(e) A preliminary groundwater management zone delineated in accordance with the procedures of Env-Wm 1403.14.

Env-Wm 1605.07 Remedial Alternatives, Summary, and Recommendations. The site investigation report shall include a preliminary screening of remedial alternatives, a summary, and recommendations including:

(a) A preliminary screening of remedial alternatives, which shall identify remedial action alternatives that meet the criteria of Env-Wm 1605.13;

(b) A summary of the following:

- (1) Site conditions;
- (2) Subsurface explorations;
- (3) Conceptual model including contaminant distribution; and
- (4) Receptors and potential receptors; and

(c) Recommendations, including a discussion of proposed corrective action activities, which shall include one or more of the following as appropriate:

- (1) Interim response actions to abate immediate risks to human health and the environment;
- (2) Periodic sampling;
- (3) Additional site investigation work; and
- (4) Remedial action.

Env-Wm 1605.08 Appendices. The site investigation report shall include appendices which include:

- (a) Color photographs showing key site features;
- (b) A description of the field procedures used including methods for installing monitoring wells, collecting soil samples, and collecting water samples;
- (c) Field screening data;
- (d) Boring logs and monitoring well construction details including but not limited to the following:
  - (1) Soil sample descriptions;
  - (2) Drilling methods;
  - (3) Water table observations;
  - (4) Odors observed; and
  - (5) Organic vapor analyzer results.
- (e) Analytical laboratory data including chain of custody forms and holding times; and
- (f) Detailed calculations and summary of data used for supplemental analysis, if any.

Env-Wm 1605.09 Site Investigation Exemptions. A site investigation shall not be required if:

- (a) The department determines that an initial site characterization shall be performed that will be adequate to define the nature and extent of contamination; or
- (b) The site meets the no further action criteria of Env-Wm 1606.03.

Env-Wm 1605.10 Remedial Action Plan.

- (a) A responsible party required to conduct a site investigation under Env-Wm 1605.01 shall prepare a remedial action plan except as provided for in Env-Wm 1605.12.
- (b) The responsible party shall submit a report of the remedial action plan required in Env-Wm 1605.10(a) to the department within 120 days following a department request for a remedial action plan.
- (c) The remedial action plan report prepared in accordance with Env-Wm 1605.11 shall be prepared by, or under the direct supervision of, a professional engineer licensed under RSA 310-A and shall bear the seal of the professional engineer responsible for preparing the document.
- (d) The remedial action plan shall:
  - (1) Provide for protection of human health and the environment;
  - (2) Provide a detailed evaluation of remedial alternatives with justification for the recommended alternative;
  - (3) Recommend action to:
    - a. Remove or treat the source of contamination;

- b. Contain the contamination source to limit the impact to groundwater, surface water, and soil to the extent feasible;
- c. Protect human health from exposure through the indoor air exposure pathway;
- d. Protect human health from exposure through the direct contact exposure pathway;
- e. Contain contaminated groundwater within the limits of a proposed groundwater management zone, delineated in accordance with the procedures of Env-Wm 1403.14;
- f. Restore groundwater quality to the groundwater quality criteria identified in Env-Wm 1403.03; and
- g. Restore soil quality to the soil cleanup standards identified in Env-Wm 1602.02.

Env-Wm 1605.11 Remedial Action Plan Report. The remedial action plan report shall include the following:

- (a) A summary of the site investigation report completed pursuant to Env-Wm 1605.02;
- (b) A remedial alternative evaluation of a minimum of 2 remedial alternatives, or combination of alternatives, appropriate for the site which includes:
  - (1) An effectiveness and reliability comparison between the alternatives;
  - (2) A feasibility and ease of implementation comparison between the alternatives;
  - (3) A risk reduction and associated benefits comparison between the alternatives;
  - (4) A cost effectiveness comparison between the alternatives using the present worth of all future costs;
  - (5) A clean-up time comparison between the alternatives; and
  - (6) A justification for the recommended alternative;
- (c) For the recommended alternative, the following information:
  - (1) A site map drawn to scale on an 8-1/2" x 11" or 11" x 17" sheet showing the system lay out and areas of influence;
  - (2) A preliminary process flow diagram showing major system components and controls;
  - (3) Final and interim contaminant reduction performance standards including a proposed schedule with target dates;
  - (4) Recommendations for conducting any additional investigations, pilot tests, or bench scale studies before proceeding with final design and construction of the recommended alternative;
  - (5) A description of the methodology for evaluating the performance of the recommended alternative, including monitoring locations and frequency;
  - (6) A schedule for implementing the recommended alternative;

(7) A list of federal, state, and local permits required to implement the recommended alternative; and

(8) A description of any activity and use restrictions being proposed at the site which meet the following criteria:

a. Left in place soils shall not create a violation of the water quality criteria of Env-Wm 1403.03; and

b. All activity and use restrictions shall be protective of human health and the environment;

(d) Recommendations to provide potable water to receptors when a water supply well no longer meets the groundwater quality criteria of Env-Wm 1403.03; and

(e) The proposed delineation of the groundwater management zone overlaid on a tax map that complies with Env-Wm 1403.14.

Env-Wm 1605.12 Remedial Action Plan Exemptions. A remedial action plan shall not be required where:

(a) The site meets the no further action criteria of Env-Wm 1606.03;

(b) The department determines, based on the site investigation, that there is no remaining source at the site and there are no impacts to receptors; or

(c) The preliminary screening of remedial alternatives completed pursuant to Env-Wm 1605.07(a) provides adequate justification to support the selection of a proposed alternative that will meet the criteria of Env-Wm 1605.13.

Env-Wm 1605.13 Remedial Action Plan Approval. The department shall approve the remedial action plan upon determining that:

(a) Human health and the environment shall be protected;

(b) The groundwater quality criteria specified in Env-Wm 1403.03 shall be met;

(c) Sources of contamination shall be controlled so as to reduce or eliminate further releases of contaminants to groundwater, surface water, and soil;

(d) Contaminated soil shall be removed, treated, or contained to reduce the human health risk associated with direct exposure via dermal contact, ingestion, and inhalation;

(e) The existing risk shall be reduced to the greatest extent practicable, balancing costs and benefits by evaluating the risk to human health and the environment by the methods described in the ASTM E 1739-95;

(f) Any future risks of discharges shall be reduced to the greatest extent practicable;

(g) Long-term management, including operation and maintenance of the remediation equipment and site monitoring requirements, shall be minimized;

(h) The potential need for modification of the remedy shall be minimized;

(i) Resource value of groundwater impacted by the contamination, including current and anticipated future land use, shall be protected; and

(j) Long-term institutional and engineering controls shall be reliable.

Env-Wm 1605.14 Corrective Action Prior to Remedial Action Plan Approval.

(a) In order to minimize contamination, reduce risk of exposure, and promote more timely remediation, the responsible party may begin remediation at a site before a remedial action plan is submitted to or approved by the department, provided the responsible party:

(1) Notifies the department in writing of the proposed activities to be conducted prior to beginning remediation;

(2) Incorporates the self-initiated remediation measures into the remedial action plan that is submitted to the department for approval; and

(3) Complies with the requirements of all applicable local, state, and federal rules and statutes.

Env-Wm 1605.15 Remedial Action Implementation.

(a) Following the department's approval of the remedial action plan in accordance with Env-Wm 1605.13, the responsible party shall initiate implementation of the approved plan within 90 days.

(b) The responsible party shall submit design plans and construction specifications to the department prepared pursuant to Env-Wm 1605.16 for any active on-site treatment system or source removal project within 90 days following department approval of the remedial action plan.

(c) The design plans and construction specifications prepared pursuant to (b) above shall be prepared by, or under the direct supervision of, a professional engineer licensed under RSA 310-A and shall bear the seal of the professional engineer responsible for preparing the document.

(d) The responsible party shall submit a remedial action implementation report prepared pursuant to Env-Wm 1605.17 to the department within 90 days following completion of remedial action implementation activities.

(e) The remedial action implementation report prepared pursuant to Env-Wm 1605.17 shall be prepared by, or under the direct supervision of, a professional engineer or a professional geologist licensed under RSA 310-A and shall bear the seal of the professional responsible for preparing the document.

(f) The responsible party shall submit periodic status reports prepared pursuant to Env-Wm 1605.18 to the department to monitor the effectiveness of remedial action implementation activities at the frequency specified in the department approved remedial action plan.

(g) The periodic status reports prepared pursuant to (f) above shall be prepared by, or under the direct supervision of, a professional engineer or a professional geologist licensed under RSA 310-A and shall bear the seal of the professional responsible for preparing the document.

(h) If implementation of the approved remedial action plan fails to meet performance standards specified in the approved plan, the responsible party shall:

(1) Notify the department in writing; and

(2) Submit recommendations for revising the remedial action plan, including a schedule of milestones, to the department for approval.

(i) The department shall approve the revised remedial action plan if compliance with Env-Wm 1605.13 has been demonstrated.

Env-Wm 1605.16 Design Plans and Construction Specifications. The design plans and construction specifications required pursuant to Env-Wm 1605.15(b) shall include the following:

- (a) A description of the purpose and function of the remedial treatment system;
- (b) A list of applicable design criteria for the remedial treatment system including, but not limited to:
  - (1) Site limitations;
  - (2) Physical properties of the soil and aquifer;
  - (3) Space restrictions;
  - (4) Subsurface obstacles, barriers, or both;
  - (5) Noise restrictions;
  - (6) Air and water discharge permit requirements;
  - (7) Remedial treatment system flow rates; and
  - (8) Remedial treatment system efficiency;
- (c) Remedial treatment system performance standards;
- (d) Characteristics, quantities, and locations of environmental media and contaminants to be treated;
- (e) Expected waste products which will be generated and their means of disposal;
- (f) Pilot test results used in the preparation of the design;
- (g) Manufacturer's data describing the equipment in the design; and
- (h) Construction plans and specifications required pursuant to Env-Wm 1605.15(b) that shall provide sufficient detail for construction of the remedial system or source removal project.

Env-Wm 1605.17 Remedial Action Implementation Report. The remedial action implementation report required pursuant to Env-Wm 1605.15(d) shall include the following:

- (a) As-built drawings indicating any changes from the original design documents;
- (b) The results of any testing or measurements made during remedial action plan implementation activities; and
- (c) A description of remedial action plan implementation activities including tables and figures.

Env-Wm 1605.18 Periodic Status Report. Each periodic status report required pursuant to Env-Wm

1605.15(f) shall include the following:

- (a) A summary of work performed during the period including a description of the type and frequency of monitoring activities conducted;
- (b) A review of the site conceptual model noting any changes;
- (c) A tabular and graphical summary of groundwater quality and treatment system monitoring data showing trends in contaminant concentrations, including cumulative mass of contaminant removed by the treatment system;
- (d) An evaluation of operation and maintenance requirements, and recommendations for modifications, adjustments, or upgrades; and
- (e) An evaluation of progress towards meeting performance standards including any recommendations for remedial action plan revisions.

#### PART Env-Wm 1606 PERMITTING AND SITE CLOSURE

Env-Wm 1606.01 Groundwater Management Permit. A responsible party shall apply for and obtain a groundwater management permit in accordance with Env-Wm 1403 where the discharge of oil at the site has caused and continues to cause the groundwater quality criteria of Env-Wm 1403.03 to be violated.

##### Env-Wm 1606.02 Certificate of Completion.

- (a) At the request of the responsible party, upon completion of the remedial action, the department shall issue a certificate of completion if:
  - (1) All activities specified in the approved remedial action plan, with the exception of soil and groundwater monitoring, have been completed;
  - (2) The performance standards specified in the remedial action plan and the groundwater management permit have been achieved;
  - (3) All monitoring requirements under the groundwater management permit are being met;
  - (4) Any necessary activity and use restrictions have been implemented;
  - (5) All penalty(ies) or fine(s) issued under RSA 146-A, RSA 146-C, RSA 147-A and RSA 485-C have been paid;
  - (6) All invoices associated with the department's recoverable cost pursuant to RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B and RSA 485-C have been paid; and
  - (7) All fees and costs due under RSA 147-F have been paid.

Env-Wm 1606.03 Certificate of No Further Action. The department shall issue a certificate of no further action which certifies that no additional investigation, remedial measures, or groundwater monitoring shall be required by the department if:

- (a) All human health hazards associated with direct exposure to contaminants through dermal contact, ingestion, and inhalation have been eliminated;

- (b) All necessary activity and use restrictions have been implemented;
- (c) All sources of groundwater contamination have been eliminated;
- (d) All on-site and off-site dissolved contamination levels meet groundwater quality criteria as specified in Env-Wm 1403;
- (e) All penalty(ies) or fine(s) issued under RSA 146-A, RSA 146-C, RSA 147-A and RSA 485-C have been paid;
- (f) All invoices associated with the department's recoverable cost pursuant to RSA 146-A, RSA 146-C, RSA 147-A, RSA 147-B, and RSA 485-C have been paid; and
- (g) All fees and costs due under RSA 147-F have been paid.

PART Env-Wm 1607 SAMPLING AND ANALYSIS

Env-Wm 1607.01 Sampling, Analysis, and Reporting.

- (a) The responsible party shall monitor groundwater quality at all sites where a groundwater management permit has been issued pursuant to Env-Wm 1403 to ensure that groundwater quality complies with the terms of the permit and with these rules.
- (b) The responsible party shall monitor surface water points and water supply wells to ensure that water quality complies with applicable water quality standards and the terms of the permit.
- (c) The responsible party shall monitor sampling points in the active remediation system to ascertain that design treatment efficiencies are achieved.
- (d) The responsible party shall install at least one hydraulically upgradient groundwater monitoring well to monitor ambient groundwater quality.
- (e) The responsible party shall operate and maintain the monitoring wells, piezometers, and other measurement, sampling, and analytical devices so that they perform to design specifications throughout the life of the monitoring program.
- (f) The parameters to be monitored shall be determined on a site-specific basis depending on the chemicals present in the discharge or contaminated area.
- (g) Frequency and location of water quality monitoring shall be determined on a site-specific basis depending on the hydrogeologic characteristics of the site, predicted rates of groundwater flow, and treatment methods employed.
- (h) The responsible party shall submit the results of all sampling and analysis required by the department, including quality assurance and quality control results, to the department no later than the 45 days after the sampling date, except as provided for in Env-Wm 1603.07 (c) and (d).
- (i) Analyses shall be performed by a laboratory certified by the United States Environmental Protection Agency (USEPA) or the department pursuant to Env-C 300.
- (j) Sampling shall be performed in accordance with:



- (1) “Practical Guide for Ground-Water Sampling,” document identification number EPA/600/2-85/104, USEPA, dated September 1985;
- (2) “RCRA Ground-Water Monitoring: Draft Technical Guidance,” document identification number PB87107751, USEPA, dated November 1992;
- (3) “ASTM Standards on Environmental Sampling”, 2<sup>nd</sup> Edition, document identification number ENVSAMP-97, ASTM, dated July 1997;
- (4) “Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition” document identification number EPA/625/R-96/010b, USEPA, dated January 1999;
- (5) “SW 846 Test Methods for Evaluation Solid Waste, Physical/Chemical Methods”, USEPA, dated December 1996; and
- (6) “Standard Guide for Sampling Waste and Soils for Volatile Organic Compounds” document identification number D 4547-03, ASTM, dated June 2003.

Env-Wm 1607.02 Groundwater Monitoring Wells.

- (a) A monitoring well shall be designed, installed, developed, maintained, and decommissioned in accordance with We 100-1000.
- (b) A monitoring well shall be constructed and decommissioned only by a water well contractor licensed under RSA 482-B.

PART Env-Wm 1608 CONTAMINATED SOIL

Env-Wm 1608.01 General Requirements.

- (a) The responsible party shall manage contaminated soils in a manner that protects human health and the environment.
- (b) The responsible party shall manage contaminated soils in accordance with applicable local, state and federal requirements including but not limited to:
  - (1) RSA 147-A and rules adopted pursuant thereto, relative to management of hazardous waste;
  - (2) RSA 149-M and rules adopted pursuant thereto, relative to management of solid waste;
  - (3) RSA 485, RSA 485-A, and RSA 485-C and rules adopted pursuant thereto, relative to protection of groundwater; and
  - (4) RSA 482-A and rules adopted pursuant thereto, relative to the protection of wetlands.

Env-Wm 1608.02 Definition. “Non-Hazardous oil contaminated soil (NOCS)” means soil which is contaminated with oil, is not a “hazardous waste” as defined in RSA 147-B:2, VII, and is certified in accordance with Env-Wm 1608.03.

Env-Wm 1608.03 Contaminated Soil Certification.

(a) Contaminated soils shall be characterized as prescribed below to determine if the soils shall be certified as NOCS.

(b) The responsible party shall complete a summary of site ownership history and history of use at the site.

(c) The responsible party shall retain an environmental consultant or environmental contractor who shall observe the site and the soil and shall review the summary of site ownership history and history of use provided by the responsible party pursuant to paragraph (b) above. If the contaminated soils are derived from an oil discharge from a household or from underground storage facilities regulated under RSA 146-C, and site history reveals no known activity during the past 30 years which might have caused the soil to become contaminated with a “hazardous waste” as defined in RSA 147-B:2, VII, the soil shall be certified as NOCS by the responsible party’s environmental consultant or environmental contractor.

(d) If contaminated soils are not generated from households or from underground storage facilities regulated under RSA 146-C, or the site history shows activities during the past 30 years which might have caused the soil to become contaminated with a “hazardous waste” as defined in RSA 147-B:2, VII, the responsible party shall conduct a hazardous waste determination in accordance with Env-Wm 502.

(e) The contaminated soil sampled pursuant to (d) above, shall be certified as NOCS by the responsible party’s environmental consultant or environmental contractor provided the testing indicates the soil is not a “hazardous waste” as defined in RSA 147-B:2, VII.

Env-Wm 1608.04 Non-Hazardous Oil Contaminated Soil Sampling. NOCS destined for off-site disposal shall be sampled in accordance with the following prior to transportation off-site:

(a) For stockpiled contaminated soils destined for off-site disposal, the responsible party shall collect representative samples in accordance with the following:

- (1) One composite sample shall be collected for every 200 tons destined for off-site disposal up to 2000 tons, plus one composite sample for every 500 tons above the initial 2000 tons;
- (2) Each composite sample shall consist of at least 8 discrete samples collected from the stockpile; and
- (3) Each discrete sample shall be taken from newly exposed soil a minimum of 12 inches deep within the stockpile and combined with the other required discrete samples to complete each composite sample;

(b) For in-situ contaminated soils destined for off-site disposal, the responsible party shall collect representative samples in accordance with the following:

- (1) One boring/test pit shall be completed for every 200 tons destined for off-site disposal up to 2000 tons, plus one boring/test pit for every 500 tons above the initial 2000 tons;
- (2) The borings/test pits required pursuant to (1) above shall be completed on an evenly spaced grid pattern through out the contaminated soil area;
- (3) At least one boring/test pit shall be located in the most contaminated soil area; and
- (4) One composite soil sample shall be collected from the contaminated zone of each boring/test pit required pursuant to paragraphs (1) through (3), above;

(c) Except as provided for in (d) below, representative soil samples required in (a) or (b) above shall be analyzed for ignitability, volatile organic compounds, total petroleum hydrocarbons, and in accordance with the receiving facility's requirements; and

(d) If the quantity of NOCS is less than 50 tons, sampling and analysis shall not be required except as required by the receiving facility.

Env-Wm 1608.05 Non-Hazardous Oil Contaminated Soil Storage.

(a) NOCS exceeding the soil standards in Table 1600-1 awaiting off-site disposal may be temporarily stored at the site of origin for a period not to exceed 4 months.

(b) NOCS shall be stored in a manner that prevents the soil from coming in contact with the ground, precipitation, and storm water run-off, for example on and covered with an impermeable material that is chemically compatible with the contamination.

(c) The contaminated soil pile shall only be uncovered when contaminated soil is being added to or removed from the pile.

(d) Public access to the contaminated soil pile storage area shall be restricted.

Env-Wm 1608.06 Non-Hazardous Oil Contaminated Soil Disposal and Reuse.

(a) Except as provided for by (b) and (c) below, all NOCS exceeding the soil standards in Table 1600-1 shall be either:

(1) Managed on-site in accordance with a remedial action plan approved by the department pursuant to Env-Wm 1605.13; or

(2) Removed from the site to an authorized treatment or disposal facility holding all requisite federal, state, or local permits, licenses, or approvals.

(b) NOCS which exceed the soil standards listed in Table 1600-1 but meet site specific standards developed in accordance with Env-Wm 1602.02 (c) and (d) may be managed on the site.

(c) NOCS which exceed the soil standards listed in Table 1600-1 but are managed in accordance with a department approved activity and use restriction may be managed on the site.

(d) NOCS which meet the soil standards listed in Table 1600-1 may be left in place or reused on site.

Env-Wm 1608.07 Hazardous Waste Contaminated Soil Storage, Treatment or Disposal. Soils characterized as a hazardous waste shall be stored, treated, and disposed of in accordance with Env-Wm 100-1100.

PART Env-Wm 1609 WAIVERS

Env-Wm 1609.01 Purpose. The rules contained in Env-Wm 1600 are intended to apply to a variety of conditions and circumstances. It is recognized that strict compliance with all rules prescribed herein might not fit every conceivable situation.

Env-Wm 1609.02 Request for Waivers.

(a) An owner or responsible party may request a waiver of specific rules contained in Env-Wm 1600

from the department, unless such request, if granted, would constitute a waiver of statutory requirements.

(b) A request for a waiver shall:

(1) Be submitted in writing to the department; and

(2) Include the following information:

- a. A description of the site to which the waiver request relates, including name, address, and the department site number;
- b. A specific citation of the rule for which a waiver is being sought;
- c. A full explanation of why a waiver is necessary;
- d. A full explanation of the alternative(s) to the rule(s) for which a waiver is sought, with backup data for support; and
- e. A full explanation of how the alternative(s) shall be consistent with the intent of RSA 146-A and/or 146-C and would adequately protect human health and the environment.

(c) The department shall approve a request for a waiver upon finding that the alternatives proposed are adequate to ensure that the provisions of RSA 146-A:11-c and 146-C:9 are met, and that human health and the environment will be protected.

(d) No waiver shall be granted which, in the judgment of the department, contravenes the intent of any statute or rule.

(e) The department shall issue a written response to a request for a waiver within 60 days of receipt of the request.

### Appendix

Provision of the Proposed Rule	Specific Statute the Rule is intended to implement
Env-Wm 1601.01 – 1601.03	RSA 146-A:4
Env-Wm 1602.01 – 1602.02	RSA 146-A:4,II
Env-Wm 1603.01 - 1603.03	RSA 146-A:5
Env-Wm 1603.04 – 1603.05	RSA 146-A:11-c,IV

Env-Wm 1603.06	RSA 146-A:5
Env-Wm 1603.07	RSA 146-A:11-c,IV
Env-Wm 1604.01 - 1604.07	RSA 146-A:4; RSA 146-A:11-c,V-a
Env-Wm 1604.08	RSA 146-C:1,V; RSA 146-A:11-c,V-a
Env-Wm 1605.01 – 1605.18	RSA 146-A:4,II; RSA 146-A:11-c,V; RSA 146-A:11-c,V-a
Env-Wm 1606.01 - 1606.03	RSA 146-A:4,II
Env-Wm 1607.01 – 1607.02	RSA 146-A:4,II
Env-Wm 1608.01 – 1608.07	RSA 146-A:4,II; RSA 146-A:11-c,V; RSA 146-A:11-c,V-a
Env-Wm 1609.01 – 1609.02	RSA 146-A:5